TON-LITTER CONTESTS (SWINE)

EXCERPTS FROM 1924 ANNUAL REPORTS OF STATE AND COUNTY EXTENSION AGENTS

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Introduction

A ton litter is one weighing 2,000 pounds or more when 180 days old. The production of such a litter is a real test of a swine raiser's methods.

The ton-litter movement was introduced as an extension project in Indiana in 1921 and from the beginning has been one of the most popular lines of livestock work.

The object of it is to teach that the greatest success in hog raising can be attained only when careful attention is given to all details of breeding, feeding, and management.

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* No attempt is made to cite all references to ton-litter contests in this circular. Only selected extracts showing typical methods and results obtained in a number of States are included. Owing to differences in terminology used in various States and to other local conditions, the information herein should be reviewed by the State subject-matter specialist concerned before incorporating any part of it in the extension programs for the State.

Profit in pork production, as in other things, is determined by the difference between cost of production and market returns. Size of litters and rapidity of gains in weight are large factors in production costs.

Some of the items that contribute to high cost of production are:

1. Poor types of breeding stock.
2. Small, weak litters.
3. Sows lacking in the maternal instinct.
4. Insanitary environment and presence of disease germs.
5. Improper feeding and management of sow before and immediately following farrowing.
6. Use of feeds that do not furnish all elements necessary for growth, development, and finish.

Prolific sows of good type, bred to suitable boars, when well fed and managed during the gestation period, should produce large, strong litters. Sows and litters when abundantly fed with suitable feeds during a suckling period of 10 to 12 weeks will supply vigorous pigs for the finishing period.

Protection against internal and external parasites and cholera should safeguard against losses from the most dangerous diseases.

Abundant pasture, grain with supplementary protein feed and mineral mixtures, will develop and finish feeder pigs at early ages.

Colorado

The ton-litter contest has been the means of bringing close home some of the main features of successful swine feeding. The contest was fostered by the Denver Chamber of Commerce, which offered $50 in cash prizes to be matched by local commercial clubs in counties employing county agents. In addition, trophies are offered for the heaviest litters in the State, besides prizes offered by breed associations.

Plans were completed locally and advertising was put out for entries which came until 24 were received, 10 club members, and 14 adults. By the first of August, 12 of the adults were out, mostly because the litters were not saved. The club members were more fortunate, as only four of them were clear out of the running. One adult and five club members finished.

The first contestant to finish was a 4-H club member, Lawrence Davis. His litter was weighed the afternoon of August 29. The 10 sows and 3 boars weighed a total of 2,446 pounds. The important point in this test is that the entire litter was saved. The litter is a purebred Poland China breed, and both sire and dam were registered. It was several weeks before another litter in the State passed this record. Then a Logan County litter was reported weighing 2,491 pounds, which was followed by a Weld County litter of 3,200 pounds, and this with a Larimer County litter of 3,369 pounds.

The feed cost of this 4-H club litter was $7.35 per 100 pounds of livestock of the litter.

A few features of this litter are worthy of comment. The average weight of the litter was 188 pounds. The pigs were allowed much freedom, having access to rye pasture until they were about three months old. They were then confined in a dry lot and fed mostly on corn and skim milk. Green

feed was supplied at irregular intervals in the form of weeds. The lot, as well as the place where the pigs were farrowed, had been used for a hog lot for a number of years and as is true with all hog lots so used was very much infested with hog worms. These pigs would begin to cough as soon as they began to move. They were treated for worms several times, but when one realizes that the worms in the lungs is only one atage of their life cycle, it is seen how little can be done by giving medicine through the digestive organs. We wish to emphasize the importance of clean quarters to prevent infection with worms. Another feature to be emphasized is the shortness of the frames and lack of height and stretch of these pigs. The heaviest pig weighed 230 pounds.

The importance of stretch was emphasized so much that Mr. Davis purchased for Lawrence a sow showing a great deal of stretch and length. Since the contest, Mr. Davis has also purchased a stretchy boar to head his herd. At the time of weighing, the litter was nice in appearance and showed that it was finished. However, the pigs were kept until the Arriba fair where they were shown. The day of the fair the litter weighed 2,640 pounds and was sold for 9 1/2 cents per pound, making Lawrence's check a little over $250. Before the pigs were weighed, the mother of the litter was sold for $75 and the stretchy sow was bought for $35, so that Lawrence had about $290 with which he bought a Ford Coupe which he and his sister drive to high school in Arriba, 8 miles from home.

In order to weigh all the pigs in the same scale, the county agent had built a substantial crate which was hauled on the running board of his automobile. A tripod with legs 8 feet long was used to swing the crate and each pig for weighing. A lock, block, and tackle were the connecting links with a steelyard attached to the crate for weighing.

The second litter to finish was the one raised by W. P. Link, the only adult in the county to finish. The total weight of his litter was 2,249 pounds. In the Link litter, two State records are still held. The heaviest litter of the State had three-eighths pound less average weight. The average weight of Mr. Link's litter was 281 pounds. This litter is purebred Duroc Jersey.

Mr. Link fenced a one-fourth acre patch of dry land alfalfa with woven wire and put an "A" style hog house in it. The pigs farrowed in this house and were never out of the pasture till they went to market. No hogs had ever been on this ground before and no signs of worms ever appeared.

Mr. Link's feed bill was as follows:

Corn	$52.23
Rye	9.30
Barley	1.97
Bran	4.02
Tankage	5.00
Alfalfa pasture	4.50

The feed cost was 3 3/4 cents per pound. The pigs were sold for 9 1/2 cents per pound, a total of $213.65, the net profit over feed being $129.43.

These pigs were "hand fed" throughout, and all grain was soaked. During the early part of the feeding period the pigs were fed three times a day, but as the weather became warmer, they would not come for the noon meal so they were fed twice a day. Mr. Link was careful to give these feeds at the same time each day.

The third litter to finish the 180-day period was that of Theodore Taylor. In May, 1923, Theodore purchased two sow pigs of the extreme rangy, stretchy type, at weaning time. When these sows were about a year old both farrowed. One sow farrowed nine pigs and saved seven. She farrowed in small quarters, built of straw and frame work. This house was low enough and small enough so that the heat of the sow and the litter raised the temperature of the house enough to keep them comfortable. The other sow farrowed 14 pigs in a barn which had too much space for the heat of the sow to raise perceptibly the temperature of the quarters. The sow and pigs were chilly all of the time for the several cool days following, and nine of them were overlaid.

Both litters had been entered in the ton-litter contest, so the seven pigs continued. At the end of the 180-day period, October 8, the litter was weighed. The total weight was 1,654 1/2 pounds, an average of 236.3 pounds per pig. These pigs were fed in a dry lot. The quarters soon became very dusty, which was not a good condition for gaining in weight. A number of things happened during the summer which interfered with the fattening of the pigs. However, the main points to be brought out in this test are small quarters for farrowing, the value of green feed, and the necessity for the best care possible.

The fourth litter to finish was that of Georgia Barnes, the only girl in the contest. Georgia has been a member of the pig club three years. Her sow is a registered Hampshire as is also the sire of the litter. This litter, 4 sows and 7 boars, at the end of the 180 days, weighed 1,718 pounds.

The feed record is as follows:

9,300 pounds of corn at $.45 per cwt	$59.85
2,750 pounds of 1/3 rye and 2/3 barley	23.85
780 gallons of milk	15.60
Alfalfa pasture until 3 months old	3.00
Total cost of feed	$102.30

The pigs were valued at 10 cents per pound the day they were weighed, or a total of $171.80, which, less the feed cost of $102.30, makes a gain of $69.50.

The feed was not given the pigs in sufficient quantity when they were on the alfalfa, hence the low weight at the close. In other words, the chief lesson to be brought out in this litter is that a lack of weight was due to insufficient feed at the time when it could do most good.

The fifth litter to be weighed was that of Melvin Johnson, a 4-H club member in his third year. This litter of six sows and six boars was a cross between a purebred Hampshire and a purebred Poland China. The final weight at 180 days was 2,230 1/2 pounds. This put Melvin third in the county.

The pigs had access to shallow water and alfalfa throughout the contest. They were fed corn, barley, rye, and milk. The grain was soaked and fed fresh each day. Feed troughs were cleaned once each day. The cost

of feed could not be obtained with much accuracy and is not included in this report. Water holes were in the pasture so that the pigs never lacked water.

The last litter in the contest to be weighed was that of J. Bryson Sutton, a 4-H club member.

These pigs had the run of the prairie until they were about three months old. W.R. Freeman, assistant State club leader, was with the county agent giving lessons in stock judging on July 22 and 23. This litter was weighed at that time, showing a little less than half a ton. Because of the poor growth of the grass or weeds which add variety to the ration, Mr. Freeman advised that the pigs be shut up and fed green corn while that should last. On the 180th day these pigs, six sows and four boars, weighed a total of 1,898 pounds. The feed cost has not been figured.

From the standpoint of the club boy, his profit for the year is easily figured. The 10 pigs were fed by the parents for half the sale price. Half the litter, for it was sold a few days after the official weighing and the price was 9 1/2 cents per pound, makes this part of the proceeds for the year $90.15. The club boy is then ready with the sow, the original investment, to start another year's work.-G. P. Newson, County Agent, Hugo, Lincoln County.

Idaho

In accordance with plans worked out by the Idaho swine growers' association, a ton-litter contest was put on under the following rules:

Requirements: The contestant must

1. Become a member of the Idaho State swine growers' association.
2. Nominate the litter for entry within 7 days after farrowing.
3. Assist the committee in properly marking and identifying the pigs.
4. Keep records of dates and approximate amounts of feeds used, including pasture.
5. Assist the committee in weighing the litter when 180 days of age.
6. Enroll with the county agent, district club leader, extension division, Boise; or the U. S. Department of Agriculture, Rupert, Idaho. A letter or post card, telephone or telegram will be all that is needed.

Rules:

1. Each contestant may enter as many litters as he wishes.
2. The litters shall be fed as each contestant sees fit.
3. No restriction as to breeding. (May be purebred, grade, crossbred, or scrub.)
4. The contestant has the privilege of showing the litter at his county, district, or State fair.

Awards:

1. Every contestant who produces a ton litter will receive a medal from the Idaho Swine Growers' Association.
2. The producer of the heaviest litter in each district will receive a gold medal and the second heaviest a silver medal. The State champion will receive a silver cup.
3. The Portland Union Stock Yards Co. will pay transportation and expenses of showing at the Pacific International of the heaviest litter finished before October 25, and give the owner a free trip to the show.

Note:

The Idaho State Swine Breeders' Association, office at Boise, will manage the contest, and the money paid by contestants will be used for the awards. In addition to the membership fee, the association will add whatever is necessary to make this contest a success. The membership fee is $1.00.

A ton litter means that the combined weight of the pigs of one litter must be a ton or more when the pigs are 180 days of age.

Forty-seven breeders applied for entry but when the litters were marked, 16 had lost so many pigs that the official entries were not made. Thirty-one official entries based on the number of pigs born were made as follows:

Breed	Number litters	Largest litter	Smallest litter	Average litter
Duroc Jersey	24	18	9	11.3
Poland China	4	14	8	10.0
Hampshire	3	11	10	10.6

Data on the 31 litters at time of entering are as follows:

Number of litters.....31
Number pigs born.....347
Average size litter.....11.19
Number pigs lost.....41
Percentage pigs lost.....11.8

Number pigs entered.....306
Average litter entered..... 9.8

The results were as follows:

Number attaining goal.....3
Number insufficient weight.....15
Number sold, drought conditions.....4
Number pigs stunted.....8
Number losing part of litter.....1

The official awards were as follows:

Prize	Contestant	Breed	Number pigs	Total weight (pounds)
First	Rambo and Mitchell	Duroc Jersey	13	2,631
Second	J. M. Fruitts	Hampshire	11	2,318
Third	J. G. Lupton	Duroc Jersey	9	2,123

The results and data on these litters are given as follows:

First prize ton litter:

Number pigs born.....15
Number pigs raised.....13

Mostly dry lot. No pasture charge.

Feed	Amount in pounds	Farm value
Oats	606	$ 8.24
Wheat	6,999	124.69
Stock feed	808	10.06
Tankage	189	7.56
Oil meal	67	2.68
	8,669	$153.23
Minerals		$ 4.62
Oil		1.94
Dip and spray		1.43
		$7.99
Total expenses		$161.22
Feed cost per 100 pounds		6.12

Second prize ton litter:

Number pigs born.....11
Number pigs raised.....11

Dry lot. No pasture charge.

Feed	Amount in pounds	Farm value
Ground wheat	7,007	$115.62
Ground barley	568	9.37
Skim milk	5,160	15.48
	12,735	$140.47
Feed cost per 100 pounds gain		6.06

Third prize ton litter:

Number pigs born.....10
Number pigs raised..... 9

Dry lot. No pasture charge.

Feed	Amount in pounds	Farm value
Ground barley	2,900	$47.85
Ear corn	1,650	18.15
Ground oats	900	15.75
Green corn on stalks	300	4.50
Skim milk	14,663	44.00
Total feed cost		$130.25
Feed cost per 100 pounds gain		6.13

-E. F. Rhinehart, Animal Husbandman, Extension Division of the University of Idaho, Boise.

Illinois

This year the principal work with hogs was with the ton-litter contest. Four litters entered the contest, three of which completed the 180 days. The ton litter which won the contest was a Duroc Jersey of 12 pigs and weighed 2,800 pounds in 180 days. This litter was given good care following the McLean system of hog sanitation and hauling to a pasture with a small stream flowing through it, which had not been contaminated in any way by other hogs. They were fed well and showed thrift all season.

The second litter of Duroc breed was fed by the boy who, the year before, won the trip to the International with his purebred gilt. This litter weighed 2,133 pounds with only 9 pigs. The average weight was 237 pounds while the winner was 233 pounds. Even if the litter did not take the first prize the average gain per pig for this litter showed some mighty good feeding, and was fed a little more economically than the winners.

Third place was won by a litter of 11 Hampshire pigs which weighed 2,102 pounds with an average of 191 pounds each. This was an excellent litter. To start with they had good pasture and a spring of water to run to. When they were about 60 days old they began to run around the chicken yards and were finally finished in the chicken yard, much against our advice.

Had these Hampshires been fed regularly and kept confined to the area where they were started, they would have made much better gains. However, the cooperator still believes that it was the nature of the breed rather than anything else that won third place.-H.C. Gilkerson, County Agent, Albion, Edwards County.

Last year 10 ton litters were fed in Sangamon County. This year the number was increased to 13. The most encouraging thing about the ton-litter work, however, was the increase in average weight of the litters. Last year the heaviest litter fed in Sangamon County weighed 2,370 pounds, while this year the heaviest litter weighed 2,699 pounds. The man who fed the heaviest litter last year fed a litter of the same number of pigs from the same sow this year. The litter in 1923 weighed 2,370 pounds and in 1924, 2,555 pounds.

The cooperation of the Springfield Chamber of Commerce and the business men of Sagamon County, together with the banks, has helped to make this project a decided success. The Springfield Chamber of Commerce offered cash premiums amounting to $125. The business men of Springfield offered

merchandise premiums amounting in value to about $500, while the banks of the county offered to buy each one of their customers a gold medal if they succeeded in feeding a ton litter. These gold medals cost the banks about $5 each.

The premiums are awarded at a banquet known as the "Hog Day Banquet," which is given the farmers of this county by the business men of Springfield, the Chamber of Commerce sponsoring the movement. Last year over 800 farmers attended the banquet. This year the banquet will be held on December 13, and approximately 2,000 farmers and their wives are expected to be present.

In this county the litters are practically all purebred or crossbred litters. There are no grade litters fed unless some might be classed as grade litters if the registration papers of the sire or dam are not obtainable.

The Sangamon County swine breeders' association has direct charge of the ton-litter project, and it is largely through their efforts that the project is so successful- I. A. Madden, County Agent, Springfield, Sangamon County.

Indiana

A meeting of livestock breeders and feeders was held in my office on January 24, when J. R. Wiley, animal husbandman, presented medals to our winners in last year's club and told the story of the Hoosier ton-litter club and the results obtained by the members last year. Each medal winner was asked to explain the details of how the project was managed.

Nine members enrolled in the 1924 contest. Because of the high price of feed and the relatively low price of hogs during the summer months, six of these members failed to complete the project. Of the three who did finish, two qualified for gold medals and one for a bronze medal.

Everett Otte of Jackson township, who has been in boys' clubs for a number of years, won a bronze medal on a litter of crossbred Duroc-Poland hogs. This litter, farrowed March 2, weighed 1,689 pounds on August 29 and showed it had been well fed and properly cared for.

Holmes E. Peters of Driftwood township, winner of a gold medal in 1922 and a silver medal in 1923, won a gold medal this year when his litter of nine purebred Duroc hogs weighed 2,084 pounds on September 7. This litter was farrowed March 4 in a small "A" type house. As the pigs learned to eat, they were given skim milk and grain in a creep-way away from the other hogs. During the pasture season, they were kept in a shady pasture with plenty of blue grass and water, and were fattened on corn, tankage, and skim milk. They were finished at six months and sold the following day. Mr. Peters is convinced that it pays to push spring pigs for the earlier market, and expects to enroll in the ton-litter contest next year.

Charlotte Mitschke, 13-year-old girl of Grassy Fork township, who won a gold medal in 1923 on her litter of 8 pigs which weighed 2,272 pounds at 6 months, also won a gold medal this year on her litter of 10 pigs which were 180 days old on September 30, and weighed 2,552 pounds on that day. These pigs were purebred Poland Chinas and were produced by the same sow as

her litter of 1923, but sired by another boar. These pigs were self-fed from the time they were big enough to eat until they were marketed. During the earlier part of the feeding they were given mill feed, bran and tankage in the self-feeder. A compartment was provided which was kept filled with the Purdue mineral mixture. During the latter part of the period, they were fed an increasing amount of corn. All through the period they received some skim milk, though there was never enough of this produced to satisfy their appetites after they were six weeks old.

These pigs were kept in a blue grass and clover pasture field where there was a good supply of water and plenty of shade. During the entire period, this litter shared its quarters with another of seven which was also entered in the club and which weighed 1,665 pounds at six months.

This 13-year-old girl did all the work of caring for the two sows and later the 17 pigs, and was careful that their quarters were kept in good sanitary condition. She was given some help with heavy lifting, but almost the entire care of these pigs was left to her. These 17 pigs which weighed a total of 4,347 pounds on August 30 were sold at the farm that day at 10 cents per pound, returning $434.70. The cost of producing these, according to Charlotte's records, was $218.07.-W. P. Stall, County Agent, Brownstown, Jackson County.

Some say one must go to central Indiana for hogs and men. But they do not know Spencer County, for one of the Spencer County men has accomplished what seemed impossible in the Hoosier ton-litter club. When Chris Brockman's one sow presented him with only seven pigs, one a monstrosity, he did not give up, but continued in the contest. Clean quarters and pasture helped him raise all seven pigs. At 181 days of age the monstrosity weighed 161.5 pounds and the other six averaged 315.25 pounds each, making a grand total of 2,053 pounds for the litter. Mr. Brockman fed the pigs skim milk and middlings and shelled corn until weaning time. Then he fed skim milk and cracked wheat and allowed them to run on blue grass and lespedeza pasture. This makes the second consecutive year that Brockman has produced a ton litter with one sow farrowing each spring. He used a purebred Duroc sow and a purebred Poland China sire.

Sidney Carter of this county is the owner and feeder of two ton litters in the Hoosier ton-litter contest. Both litters were purebred Poland Chinas and each litter contained 11 pigs. At 180 days of age one litter weighed 2,338 pounds and the other 2,257 pounds. Mr. Carter used sanitary farrowing pens with scant bedding and guard rails. The pigs were switched to self-feeders in pasture as soon as possible. Corn and tankage were fed. The last 10 days he pulled the self-feeder to the corn field with soybeans for hogging down; and they were finished there on green corn and soybeans. -Warren O'Hara, County Agent, Rockport, Spencer County.

Iowa

The ton-litter project was taken up in hope that we might be able to interest the farmers in joining the contest and to demonstrate, if possible, the fact that we might profitably produce fewer but better hogs.

The rules were made as simple as possible in that the litter must be the product of one sow and weight would govern the awarding of the $100 given by the farm bureau. The litters were weighed at 180 days of age.

George Sulgrove of Penn township fed a litter of 11 purebred Chester Whites that weighed 2,610 pounds at the end of the feeding period. These pigs gained at the rate of 1.32 pounds per day. The feeds used were rape pasture, corn, and tankage, self-fed with a slop of shorts, oil meal and bran.

Fred Brownwell fed a litter of 12 crossbred Poland Tamworths which made a total weight of 2,503 pounds and an average gain of 1.27 pounds per day.

Earl Graves of Scott Township fed a litter of 12 Chester Poland crossbreds that averaged 1.11 pounds per head per day and weighed 2,394 pounds at 180 days.

Ryman Smith of Jefferson fed a litter of 11 purebred Hampshires, which averaged 1.15 pounds gain per day, reaching a total of 2,283 pounds.

Robert Brownlie, a 14-year-old boy, fed a litter of 10 purebred Durocs which made an average daily gain of 1.25 pounds and a final weight of 2,251 pounds.

The outstanding result of this contest was that the big, rangy type of pigs was the one that stood up under the long feeding period. The feeds used by all were corn, tankage, slop of ground feed, and blue grass, rape, or clover pasture.-Lloyd H. Churchill, County Agent, Winterset, Madison County.

Kentucky

This year, for the first time, we inaugurated the ton-litter scheme in our extension work. It proved surprisingly popular despite the undesirably low hog market. More than 50 members were enrolled in the club, 25 of whom completed. The heaviest litter, consisting of 16 pigs, weighed 3,312.5 pounds at 6 months of age. The ton-litter idea teaches the Kentucky hog raisers that good feeding and management, in addition to the advantage of early fall market, return greater profits than when hogs are fed in the ordinary way. It is a common practice in Kentucky to depend solely on pasture, and often poor pasture, to carry pigs through the summer, after which they are fed out for the late fall and winter markets. Thus the pigs reach the market at the time when hogs are lowest in price.

A majority of the men producing ton litters had their pigs farrowed in March, and by so doing the pigs reached 6 months of age in September, and were weighed and sold on what is usually the highest market of the year. This is the system we are teaching by the ton-litter project. In addition to that, it will increase the number of pigs saved per litter because a large number is necessary when it is desirable to produce an unusual record, and will improve the breeding of hogs.

Since we have no active swine breeders' association to assist with prizes, as they do in other States, we offered none. The coming year, however, various feed companies and others are offering prizes, such as feed and other merchandise, to the extent of about $400. The State fair has put on a ton-litter class for 1925 and is offering prizes to the extent of $250. These awards will be a great stimulus to this project.-Grady Sellards, Extension Swine Specialist, College of Agriculture, University of Kentucky, Lexington.

Maryland

One of the most outstanding features of club work has been that of William Sleek's development of a ton litter. William developed his 10 pigs of one litter to weigh 2,150 pounds in 5 1/2 months of the 6 months allotted for the project. This gives William the State record. He also has the distinction of being the first Maryland breeder to succeed in developing a ton litter within six months.

One of the interesting features of this work is the fact that it proved to our county breeders that pigs pay if cared for in the right way. It seemed to William that he was throwing feed away, but when the pigs were sold he found he had produced pork at the very nominal cost of 4.26 cents a pound.-B. B. Derrick, County Agent, Bel Air, Harford County.

Minnesota

The Minnesota ton-litter contest closed November 1 with 41 farmers making a ton or more of pork from 1 litter in 180 days. Of others that reported eight had litters over 1,950 pounds and eight had litters over 1,800 pounds. Two hundred and fifteen farmers enrolled officially in this contest, representing 43 counties with one or more entries.

The weights ranged from 2,008 to 3,102 pounds. The average weight was 2,332.8 pounds. The important lesson brought out in the contest was that producing a ton or more of pork from one sow requires good breeding, good feeding, and good management. It also emphasized the importance of strict sanitation, as pigs must be kept growing every day and kept free from disease. It will be noticed that the average number of pigs in a litter making a ton was 10.7. The original cost of each pig was less than that of pigs from litters of four or five, which is one of the big factors that determines profit in hog raising. The raising of a ton or more pork from one sow means more profit than raising the same amount from two or three sows in the same length of time.

The ton-litter contest demonstrated the value of well-bred hogs for pork production. It showed that purebred hogs are more highly developed machines to convert farm feeds into pork. Notice will be taken that not one scrub litter made the ton-litter contest, while grades did not do as well as purebreds. Cross-breds showed up well for pork production.

Usually, pigs crowded for the market from the day they are born until they are marketed make the cheapest gains. There is less feed for maintenance when pigs reach the required weight in six months rather than eight or nine months, which is about the average.

Most of the pigs in the litters that made the ton were ready for market at the age of 5 or 5 1/2 months. The shorter time lessens the risk with disease. Pigs crowded for the early market, on an average, bring a higher price than those marketed late when markets are flooded.- H. G. Zavoral, Animal Husbandman, Department of Agriculture of the University of Minnesota, St. Paul.

Missouri

In the spring, 22 farmers entered the ton-litter contest but all except two dropped out, one litter belonging to E. E. Sailor and one belonging to Everett Walker. Both of these were Duroc Jersey litters.

Mr. Walker and Mr. Sailor were running neck to neck for four months, but the different methods of feeding demonstrated the practice of growing the pig before making it fat to be the wiser. At 4 months of age, when Mr. Walker was ready to crowd his pigs they were already crowded, having been fed too much corn before they were capable of handling it; consequently they were through at four months. Mr. Sailer raised his pigs well, feeding nothing but a practical farm ration, and on August 29, the day his litter of 19 pigs were 180 days old, they weighed 2,215 pounds. A meeting was held at which the methods of handling this litter were discussed. Mr. Sailor kept a complete record which showed a cost of $6.12 per 100 pounds gain.

Mr. Sailor's record is as follows:

Feeds	Amount consumed	Cost
Shorts	1,600 pounds	$22.40
Pig chow	800 pounds	24.00
Tankage	300 pounds	7.50
Mineral mixture	100 pounds	.75
Ear corn	800 ears	14.28
Shelled corn	3,810 pounds	58.00
Alfalfa pasture	180 days	9.00
Total cost of feed		$147.93

Cost per 100 pounds gain.....$6.12
Market price per 100 pounds.....$10.00

The outstanding features brought out to the farmers present were:

1. The fact that both sire and dam were breeders of a type of offspring capable of making economical gains. The dam was one capable of producing and suckling a large litter of uniform size and quality.
2. The value of sanitary methods at and before farrowing time. The value of growing pigs on clean ground.
3. The shortness of the feeding period lessened the cost and gave a quick turnover. The litter had all they wanted to eat at all times and made economical use of all feed.
4. The value of a ration balanced to meet the needs of the animal being fed and the necessity of building framework before putting on fat.
5. The economy of gain as shown by the cost per 100 pounds.
6. The value of finishing hogs early when market prices are usually better.
7. The value of simple but accurate records on all operations.- D. L. Pippin, County Agent, Marshall, Saline County.

2166

Montana

One of the major projects in the hog industry has been the organization of the ton-litter contest among the hog breeders of the county. This contest was conducted under the rules and regulations drawn up by the Montana State extension service and has been followed generally in every detail. The general plan of this contest is for each farmer to produce a ton or more of pork from a litter of pigs, feeding on Montana grown feed. Quite a large number of farmers enrolled in this contest, entering a total of 29 litters. The work has been promoted and sponsored by the Farmers' National Bank of Chinook offering $100 in cash for the largest litter produced in the County.

Additional prizes have been received from outside organizations such as the Great Falls Packing Co., the Duroc Jersey Breeders' Association, and the Poland China National Breeders' Association. The prizes totaled $175, giving $100 for the first prize, $50 for the second, and $25 for the third. The result of the contest was very gratifying. Twelve litters completed the contest. The largest litter weighed 2,459 pounds, the smallest 1,572 pounds. The three largest litters consisted of 12 pig each, and the smallest litter had only 9 pigs. The highest weight for any individual pigs was 240 pounds, the lowest 163 pounds. The contest created a great deal of interest and has increased the number of pigs over the county.-G. W. Gustafson, County Agent, Chinook, Blaine County.

Nebraska

The first litter to make the grade in the ton-litter project was the Henry Stoltenberg litter of 9 purebred Berkshires. This litter was taken to Viola and fed and cared for in the Berkshire pig club. The day this litter was 6 months old it averaged 222 1/2 pounds. This ton of pork, for the litter weighed 2,003 pounds, was produced on 56 1/4 bushels of corn, 30 1/3 bushels of oats, 46 1/2 pounds of tankage, 18 pounds of mineral mixture, 90 days pasture, and 5 gallons of milk daily from the time the pigs were weaned.

Current prices were charged monthly for feeds, the total feed cost being $69.45; corn was bought for 75 cents and oats for 40 cents. The litter brought $182.27 on the market at Tilden the latter part of the week ending September 27. This litter was produced at a cost of a fraction under 3 1/2 cents per pound. Mr. Stoltenberg said that he was sure this rate of gain could not be duplicated on 25 head of hogs, and he said he thought that the 5 gallons of milk daily did more to cheapen the gain than any other one thing. This litter was kept on clean ground and was never bothered with worms or filth infections.

An interesting contrast in what this litter did with the addition of milk as compared with pigs of approximately the same age that were put on clean ground was shown by the average weight of this bunch which were not forced and which weighed 180 pounds as compared with the litter which averaged 222 1/2 pounds in the same time. But little corn was fed the ton litter until the last 30 days when they were put in a dry lot and given all the corn they would eat. They gained a fraction over 3 pounds daily during this period.-R.A. Stewart, County Agent, Battle Creek, Madison County.

New Jersey

What may be considered the most remarkable feat in boys' and girls' club work in the entire county has been completed by one of our boys in Salem County. It is not only a wonderful achievement for a club boy but it is something that commands the attention of the entire livestock world.

Melvin Patrick, of Manhattan township, has grown a litter of 9 Poland China pigs which, in the allotted 180 days, made a growth of 2,643 pounds. On Thanksgiving Day this litter was weighed on the farm of Linwood Patrick where it was grown. The weighing, which was done by the county club agent, was witnessed by about a hundred farmers.

This litter of Poland China pigs has shattered the State ton-litter mark by several hundred pounds. Not only has it shattered the total mark in the State, but it has made a record which almost equals the average made in the world's ton-litter contest where the winning litter with 14 pigs made a little over 4,200 pounds. This is an average for the world's ton litter of slightly over 300 pounds, while young Patrick's litter averaged a trifle over 296 pounds.

At one stage of the 180-day period, the boy could not purchase skim milk and had to change to semi-solid buttermilk which was a setback. Early in November the litter contracted colds and went off feed for several days. Had these things not happened, young Patrick would probably have beaten the world's ton-litter average.

The Salem National Banking Co., and the City National Bank of Salem each offered $25 for prizes. The First National Bank of Elmer gave $10, and a private party contributed $20. Young Patrick won the first prize of $35 and the high average prize of $25. He sold two of the sows in the litter for breeding purposes and altogether has made about $200 clear profit on his litter.

The feeding of this ton litter demonstrated the following facts: Pork raising in New Jersey is profitable under certain conditions. If the price of pork is good, money can be made even though all feed is bought; whether the price be high or low the amount of profit depends on the way the pigs are fed. We need to supplement the growing ration with some pasture crop, in order to get the maximum profit. The feeding of commercial feeds, the use of semi-solid buttermilk, or skim milk, if it costs any appreciable amount, is bound to take a large share of the profit out of the business.- F. J. Goggin, County Agent, Club Agent, Salem, Salem County.

North Dakota

The ton-litter contest was handled in cooperation with the North Dakota livestock breeders' association. The association rules and regulations governed the contest. The above organization agreed to give a gold medal to any purebred hog breeder who could produce a litter that would weigh 2,000 pounds or more, at the age of 180 days.

All entrants were to report to the county agent every litter farrowed on the farm before it was 7 days of age. Every herd was inspected at some time during the season for the purpose of checking up identification

marks. A representative of the livestock association, a local farmer, and the county agent acted as the weighing committee.

Of the 23 litters entered in Cass County, only two reached the ton weight in the allotted time. W. W. Brown had a litter of 10 purebred Poland Chinas which weighed 2,065 pounds. Otto Wilner, a Duroc Jersey breeder, had a litter of 10 which made a weight of 2,661 pounds. Both farmers kept complete records showing the care of the sow and litter after farrowing time, as well as a complete feeding record of the litters during the feeding season.

During the summer Mr. Wilner used a ration consisting of two-thirds ground oats and one-third ground barley, by weight. The litter was not fed with the rest of the pigs on the farm. They were placed in a clean pasture lot with the sow when they were 8 days old. The pasture consisted of blue grass with a small amount of alfalfa and sweet clover. The pigs were allowed to wean themselves. They were allowed what feed they would eat each day, a small amount of skim milk and, in addition, received 200 pounds of tankage. The tankage was fed at the rate of one-half pound a day during only a part of the feeding period. During the winter the sow was allowed to run with 14 other sows. They wintered in a straw shed and were fed on a clean floor in the hog house about 100 yards away from the shed. The ration consisted of about 3 pounds per day of ground grain- two-thirds oats and one-third barley. In addition, the 15 brood sows received about 10 gallons of skim milk. The weight of each of the pigs in the Wilner litter is shown in the following table:

Sows	Boars
284	296
264	282
264	282
254	256
240	
239	
1,545	1,116

The total weight was 2,661 pounds.

Wallace Brown wintered 12 brood sows. During the forepart of the winter, they received a ration consisting of one-half ground barley and one-half ground oats. During January, February, and March, these sows received equal parts of ground barley, oats, and corn, and what alfalfa hay they would clean up. During the farrowing period they received one-third each of ground barley, oats, and shorts, plus alfalfa hay. After farrowing, the sows received the same grain ration, a pound of tankage per day, and alfalfa.

As soon as the pigs were old enough to take feed other than the sow's milk, they were given a ration of one-half ground barley, one-fourth oats, and one-fourth shorts, together with one-half pound of tankage per day. Mr. Brown wintered his sows in a hog house consisting of 12 pens, 8 by 10 feet in size. Mr. Brown put the sows in individual pens about three days before farrowing time, and at farrowing time provided farrowing rails and a stove in the barn. In order to protect the hogs from disease and parasites, he used Kresco Dip.

The ton litter was weaned at about 10 weeks of age. They were allowed to run with the rest of the spring pigs on the farm, until they were 7 weeks old. A ration of one-half barley, one-fourth oats, and one-fourth shorts, and one-half pound of tankage was fed to the pigs during the feeding period until the time they were weighed. In addition to the above feed, the ton litter consumed 30 gallons of semi-solid buttermilk and were provided with a mineral mixture. The following table shows the weight of each pig in the Brown litter at weighing time:

Sows	Boars
218	225
197	223
196	222
186	213
186	199
983	1,082

The total weight was 2,065 pounds.- William Guy, County Agent, Fargo, Cass County.

Ohio

This is the second year for the ton-litter project in Ohio. It is used strictly as a demonstration of what can be accomplished toward successful and profitable pork production by using approved practices in breeding, management, and feeding. The contest feature of the project is not even considered except as it may add some zest to the accomplishment in the minds of some to undertake the project.

There are some who are inclined to criticize the ton-litter club from an extension standpoint, on the basis that its aims are too high to reach any large number of swine producers and that, through its teachings, we can never hope to raise any considerable portion of any herd to the standard set. However, it seems to us that neither of these criticisms is just in the light of what has already been accomplished. When each of the herds enrolled are considered as a demonstration herd, it seems that it would be hard to get a better medium for promoting the best in breeding, management, and feeding practices.

In 1924 there were 264 litters entered, from which 129 were nominated. Forty-four counties were represented in the original entries as compared with 27 counties a year ago, an increase of 60 per cent. The aim for 1925 will be entries from at least 50 counties.

The methods of teaching the subject matter for the project are general meetings, sheets of mimeographed material sent out periodically, and meetings on farms at time litters are weighed.

The county agents have charge of all local arrangements for the project, such as getting entries, seeing that herds are inspected and litters are weighed at the proper time, and arranging for meetings. All material, however, is furnished by the specialists.

Out of the 129 litters nominated, 37 attained the goal set and many failed by only a small margin, but in all instances the object of the

project was demonstrated. In fact, in some instances, failure to make the goal probably demonstrated the object as successfully as if the goal had been attained. One of the noteworthy achievements of the club this year is the fact that, in one herd, four ton litters were produced and a fifth litter of nine pigs failed only by a small margin. This accomplishment shows beyond a doubt that it is entirely possible to bring a fairly large percentage of the herd to the standard set by the club.-C. W. Gay, Animal Husbandman, College of Agriculture, Ohio State University, Columbus.

Oklahoma

There were 12 litters weighing above the ton mark at 180 days of age in the Oklahoma 1924 ton-litter contest. These litters were all fed for practical, economical production without any expensive methods to induce rapid growth so that the lessons brought out by their records are of practical value to every swine grower in the State.

Three factors are essential for success in developing and growing a ton of pork: (1) Selection of a sow that will produce a large litter of pigs; (2) saving the pigs; and, (3) proper feeding methods.

Loss of pigs at farrowing time and shortly afterwards was the one factor which eliminated a large number from the contest. It is obvious that it is impossible to make the pigs in a small litter heavy enough to overcome the handicap of numbers. In fact, only one litter of eight pigs in the Oklahoma club made the required weight.

All litters that reached the ton mark were purebreds. Adherents of all breeds of registered swine have always maintained that purebred hogs have greater earning power than, and are superior to, grades and scrubs or hogs of uncertain breeding for converting farm grown feeds into pork. The results of the ton-litter contest furnished good proof for this argument.

The litters to reach the ton mark are as follows:

Owner	Breed	Number pigs	Total weight (pounds)
John Broderick	Duroc Jersey	13	2,997
John Johns	Poland China	10	2,844
W. T. Cammon	Poland China	11	2,795
C. C. Perry	Duroc Jersey	13	2,707
Ralph Blazier	Poland China	11	2,613
C. W. T. Henderson	Poland China	8	2,350
Clarence Kingery	Duroc Jersey	11	2,345
L. G. Leonard	Hampshire	11	2,232 1/2
Hillendale Farms	Duroc Jersey	11	2,230
J. H. Ward	Poland China	10	2,182 1/2
Gillentine Brothers	Duroc Jersey	12	2,140
Ray Allen	Duroc Jersey	11	2,132

Only one litter of eight pigs reached the ton weight. The average cost of producing 100 pounds of pork on the 12 ton litters was $6.85 and the average net profit per pig was $6.

The record of John Broderick's litter is as follows:

Feeds	Amount consumed	Cost
Corn	50 bushels	$40.00
Shorts	1,600 pounds	28.00
Pig chow	1,600 pounds	48.00
Buttermilk	1,600 pounds	48.08
Whole milk	150 gallons	26.25
Pasture	4 Acres	5.00
Total feed cost		$195.00
Animals sold alive -13 pigs		329.67
Net profit from demonstration		134.34

The record of Ralph Blazier's litter is as follows:

Feeds	Amount consumed	Cost
Barley chops	2,400 pounds	$32.50
Corn chops	1,200 pounds	24.95
Tankage	150 pounds	6.00
Corn	5,810 pounds	83.00
Wheat	1,500 pounds	25.00
		$171.45
Cost of concentrates		$171.45
Cost of sow		32.00
Cost of pasture		12.00
Cost of skim milk		18.00
Total expense		$233.45
Animals sold for		$223.45
Value of one pig butchered		25.00
Value of sow		47.00
Total receipts		$295.45
Net profit for demonstration		$62.00
Net profit per head		5.63

-P. H. Lowery, Animal Husbandman, Oklahoma Agricultural and Mechanical College, Stillwater.

In the livestock program adopted for our county, the ton litter was the main issue. This project was to demonstrate how to care for the pigs at farrowing time, how to save the pigs, and how to grow them quickly, with a good gain, for market. We started the contest with 25 enrolled, but only two finished. Clarence Kingery, a club member, enrolled with a Duroc sow which farrowed 11 pigs. He had prepared a farrowing pen equipped with fenders and sheltered from the storms. He saved every pig.

At the end of 180 days this litter of 11 pigs weighed 2,385 pounds. The feed cost was $157.75. Clarence sold the litter for $379.35, which makes a gain of $211.60, besides the premiums he won at the fairs. He won a trip to the State fair and cash premiums which amounted to $128.50. He also won second place in ton litters in the county.-A. I. Jordon, County Agent, Enid, Garfield County.

Pennsylvania

In 1924 the ton-litter club was advanced as a major swine project for the primary purpose of bringing out, in striking fashion, the importance of breeding, feeding, and management in a program of economic production. The results of the first year's work on a state-wide basis have clearly demonstrated the points emphasized. Accurate records of feed costs, labor, and incidental expenses tell interesting stories. The net profit ranges from $3 to $13 a pig or from $30 to $130 a litter.

Each of twenty-five counties of the State produced one or more of the 58 ton litters grown in 1924.

Pennsylvania swine growers had the following to their credit in the first year of the ton-litter project in the Keystone State:

1. As many 8-pig litters as were previously produced in the whole United States, four in number.
2. Tied a world's record made by a 7-pig litter in Texas in 1923, by producing 7 pigs weighing 2,018 pounds.
3. Had the heaviest Chester White litter ever produced in the United States, 15 pigs weighing 3,461 pounds.
4. A total of 11 Berkshire ton litters, being a larger total than that produced by all States in all previous years.
5. The heaviest Berkshire litter yet reported in the country, 12 pigs weighing 3,178 pounds.
6. A total of 58 ton litters and 23 litters weighing 1,800 to 2,000 pounds.
7. The second heaviest litter in the United States for 1924.
8. The largest number of ton litters from any single county in the United States, 11 ton litters in York County.-

M. S. McDowell, Extension Director, The School of Agriculture, Pennsylvania State College, State College.

Two litters of pigs in the county were enrolled in the Keystone ton-litter club. Both litters weighed over a ton when the pigs were 180 days old.

Litter No. 1 was from a Berkshire sow bred to a purebred Duroc boar. There were 10 pigs in this litter. They were started on corn, oats, bran, middlings, tankage, and a small amount of semi-solid buttermilk, having been weaned at the age of two months. The third and fourth months this litter was fed corn, tankage, and middlings. The first few months the pigs were on rape pasture and later on alfalfa. The cost of the feed consumed by the litter after weaning up to the age of six months, was $122. The litter weighed 2,193 pounds at the age of 180 days.

Litter No. 2 was of the Poland China breed. Both dam and sire were purebred. This litter was also weaned at the age of two months. The ration for the entire period was corn, middlings, and tankage in the proportion of 4,3,1. The corn was ground and the feed made into a thick slop. They were allowed as much of this feed as they would eat freely. During the fourth, fifth, and sixth months, they received all the shelled corn they would eat in addition to the slop. The third month, they were turned on blue grass pasture and from the fourth month to the end of the period, they were on a rape pasture. The feed cost after weaning up to the 180 days was $117. The litter weighed 2,161 pounds.

The outstanding facts in producing these two ton litters are:

1. Good breeding.
2. Exercise for sows and litter as soon as farrowed.
3. Leaving litter with sows up to the third month.
4. Getting pigs to eat well before weaning.
5. Feeding balanced ration.
6. Pasture.- A. C. Berger, County Agent, Lebanon, Lebanon County.

In 1924 the York County swine breeders established an unusual record in pork production. Thirty-four members enrolled in the Keystone ton-litter club which was organized throughout the State for the first time this year. Only 22 of these men, however, succeeded in raising a litter of sufficient size to weaning age to continue as certified members of the club. Eleven of these reached the goal of one ton or more pork from a single litter, in 180 days. Six additional members reached the 1,800 pound mark while only five failed to qualify in either of these weights.

A complete summary of winning York County entries in the Keystone ton-litter club follows:

Name	Breed	Number pigs	Weight (pounds)
R. D. Snyder	Grade Chester White	10	2,222
John F. Hunt	Purebred Duroc Jersey	9	2,051 1/2
Irwin Resh	Purebred Berkshire	9	2,131
Earl McPherson	Purebred Poland China	8	2,127
C. H. Gross	Grade Poland China	13	2,363 1/2
Curvin Sheffer	Purebred Poland China	9	2,016
J. J. Werner	Grade Berkshire	12	2,691
Stewart Lehman	Grade Duroc Jersey	12	2,725
Stewart Lehman	Purebred Duroc Jersey	11	2,330
Rufus Julius	Purebred Berkshire	12	3,178

A gold medal, suitably engraved, was awarded to each club member who succeeded in reaching the ton mark, while a silver medal was awarded for each litter weighing 1,800 pounds and less than a ton. These medals were furnished by the various breed associations. York County holds first place among Pennsylvania counties in the number of ton litters reaching the goal

in 1924. This is a larger number of ton litters than has ever been produced in any county in the United States in any one year prior to this time.- George G. Weber, County Agent, York, York County.

Tennessee

When the ton-litter contest was started in the spring, there was some doubt as to its outcome. However, at the end of the year, we find that Tennessee made a splendid showing when compared with other States. Tennessee had 33 litters to qualify and 9 others to go over the 1,600 pound mark.

There were 90 litters entered from 23 counties and 33 made the required weight from 15 counties and 9 others that made over 1,600 pounds from 3 additional counties.

Counties finishing litters are as follows:

Gibson	1	Shelby	1
Bedford	3	Hickman	2
Marshall	4	Maury	2
Sumner	1	Wilson	4
Franklin	4	Hamilton	2
Campbell	1	Hamblen	2
Jefferson	4	Loudon	1
Sullivan	1		

There were 18 persons who kept feeding records of their ton litters. There were four who kept feeding records of litters that did not reach a ton. The prices of feeds were figured just as they were reported by the demonstrators. There were variations on the price of corn of from $ .80 to $1.40 per bushel. However, every man who fed his litter to the weight of a ton or more made money. The more rapid the gains made, the cheaper the cost of production.

An example in the comparison of the cost of gains with rapidity of gains may be shown in the case of the Kathleen Martin litter of pigs, which made the greatest average daily gain per pig of any in the contest. Her litter weighed 2,674 pounds in 174 days and made an average daily gain per pig of 1.47 pounds. Another litter, owned by T. H. Guthrie, made only an average daily gain of 1.03 pounds per pig, with the litter reaching only 1,675 pounds in 180 days. When the cost of feed in the case of the latter litter is figured on the same basis as the Kathleen Martin litter, the cost per 100 pounds gain of the Guthrie litter amounts to $9.71.

The ton-litter demonstration of Edwin Elam, of Lebanon, is as follows:

This litter of 12 crossbred pigs weighed 2,628 pounds at 180 days and was fed at a cost of $6.78 per hundredweight. This litter won first prize of $50 at the Wilson County fair first prize of $70 at the State fair. In addition, this litter was one of four that won first prize in the carload class at the State fair, one-fourth of the premium money being $25. This makes a total of $145 won in premiums by this litter. This litter was sold

to the Power Packing Plant for 13 1/2 cents per pound, with a 5 per cent dockage on weight. At the above price, this litter brought $337.09, or a total with premiums of $482.09. The total cost of the litter was $178.93, and this amount deducted from $482.09 leaves a net profit of $278.16 on one litter of 12 pigs.

The prices and premiums received, of course, do not represent average farm conditions. If the litter had been sold on the farm at the price of $10.25 per hundredweight offered, it would have netted Mr. Elam $88.06, or $7.33 per pig which amount represents a nice profit.

The ton-litter demonstration of Kathleen Martin is as follows:

Kathleen Martin is a club girl of only 14 years. She fed a litter of 10 pigs to the weight of 2,669 pounds in 177 days. This litter was the heaviest shown in the State when age is taken into consideration. This little girl won first prize of $125 at the East Tennessee Division fair, and sold the litter for 11 1/2 cents per pound, or a total of $309.93. This amount added to the premium money makes $431.93. The feed cost of the litter was $177.95. This left a net profit of $253.98. If the litter had been sold at home for the farm price of 10 cents per pound, it would have netted her $89.45 above feed cost.-C. A. Keffer, Extension Director, College of Agriculture, University of Tennessee, Knoxville.

As a means of bringing before the farmers of the county the most important principles of economical production of market hogs, the ton-litter project was undertaken. Hogs being the chief source of income for this county, the advisability of such a project is self-evident.

Out of 15 men who applied to enter this contest only 6 actually started the project. The reason the most of them dropped out was because their sows lost so many pigs at farrowing time they had no chance to attain the goal of 2,000 pounds in weight at 180 days. Thus, in the very beginning it was forcibly proved that one of the greatest leaks in profit is due to the improper management of the brood sows before and at the time of farrowing.

Stanfill & Co. and Mr. Shelby were the only two who completed the project and attained the goal. It is noteworthy that Stanfill and Co. were unable to reach the low cost of gain that was attained by Mr. Shelby who used a ration of skimmed milk and home grown grain. Stanfill & Co. had a litter of 11 purebred Poland China pigs and Mr. Shelby had 9 purebred Poland Chinas.

The feed record of Stanfill & Co. is as follows:

Feed	Amount	Cost
Shorts	200 pounds	$3.30
Shorts	89 bushels	71.20
Pig chow	2,000 pounds	60.00
Semi-solid Buttermilk	200 gallons	8.00
Total feed cost		$142.50

The following is Mr. Shelby's feed record:

Feed	Amount	Cost
Shorts	1,300 pounds	$21.45
Shorts	55.1 bushels	44.08
Tankage	150 pounds	5.17
Milk	330 gallons	16.50
Total feed cost		$87.20

	Stanfill & Co.	Shelby
Days of age when sold	180	160
Total weight in pounds	2,358	1,650
Price received per 100 pounds	$ 11.25	$9.75
Total amount sold for	$275.27	$160.87
Total profit	133.77	73.67
Profit per pig	12.16	8.18
Feed cost per 100 pounds gain	6.08	5.25
Pounds fed to produce 100 pounds gain	313	300

-J.P. Ricketts, County Agent, Centreville, Hickman County.

Texas

In the ton-litter project adverse hog prices dampened interest, and we finished with only 12 litters successfully passing the ton mark. The leading Corn Belt States, where there are four to five times as many farmers interested in hogs, finished with 40 to 60 litters. Texas, however, again broke the world's weight record with a litter of 14 purebred Poland China pigs weighing 4,291 pounds. This makes the second year in succession that Texas led the world with the heaviest litter.

In spite of the high cost of feed, all litters in the contest made a good profit. The demonstrations have shown that hogs, to be profitable, must possess three things: First, they must have ability to produce and save large litters; second, they must possess easy feeding ability, capacity to make maximum gains on minimum feed; and third, they must top the market.
-A. L. Ward, Swine Specialist, Agricultural and Mechanical College of Texas, College Station.

Virginia

The ton-litter contest was the special hog project for 1924 and had for its object the improvement of feed and management methods of raising hogs in Virginia. Seventy farmers were enrolled in this contest prior to March 1. However, only 20 litters exceeded the ton mark at the end of the period. Though a comparatively small number of those entered made the ton mark, there were quite a few who closely approached it. All of the litters which made good weights were profitable to their owners and were excellent demonstrations to the farmers in the counties in which they were located.

The county agent in Princess Anne County reports as follows:
"I supervised the feeding of one litter of pigs which was entered in the Virginia ton-litter contest. This litter consisted of 12 purebred Duroc

Jersey pigs which weighed 2,845 pounds at 180 days old. This litter won the State contest, beating the nearest competitor by 421 pounds."-J. R. Hutcheson, Extension Director, Virginia Polytechnic Institute, Blacksburg.

The most outstanding piece of animal husbandry work done this year was by Jack Gordan of Union Level, in the growing of a ton litter to weigh 2,424 pounds. This litter was the second highest in the State and the first in average weight per pig. The owner of this litter had two sows lose the bulk of their pigs early in the spring; but an Ohio Improved Chester sow farrowed 12 pigs, with one dead at birth, another dying when about one month old, and a third dying with thumps when the contest had progressed about six weeks. Under these handicaps, he took the remaining 9 pigs and made them average 269 pounds. His feed costs amounted to 8 3/10 cents per pound which he could have cheapened had he been successful in providing more pasture. These pigs were largely fed by self-feeder on a commercial hog mixture, slop, and so forth. The pigs were sired by a big-boned Poland China boar of excellent type and were out of an O. I. C. sow of pure breeding. This ton litter has stimulated a good deal of interest and several men will enter the contest in 1925.-N. H. Williams, County Agent, Chase City, Mechlenburg County.

Washington

The first, second, and fourth heaviest litters in the Spokane Interstate fair ton-litter contest were raised by Spokane County pig club boys. Fred Gray not only won the ton-litter contest by raising 3,055 pounds of pork from one litter in six months, but he has kept an accurate record of how he did it, which to the farmers is vastly more important than winning the contest.

The weight of the 12 pigs in the litter at the age of 5 months and 7 days was 2,695 pounds. This was an average daily gain of 1.4 pounds per pig from date of birth. The lighest pig weighed 200 pounds and the heaviest 254 pounds.

The feed cost from the time the sow was bred till the pigs were weighed was $221.86, or a little less than 8 1/3 cents per pound gain, not including alfalfa pasture to which they had free access. This included 800 pounds of wheat and 300 pounds of oats. Feed for the sow from breeding till farrowing time included 1,280 pounds of wheat, 200 pounds of oats, and 100 pounds of digestive tankage or meat meal fed the sow from farrowing time to weaning time. It also included 6,608 pounds of wheat, 1,585 pounds of oats, 720 pounds of meat meal or tankage, 100 pounds of middlings, and 20 pounds of mineral mixture fed the pigs from the time they began to eat till the time they were weighed. This makes a total of 10,613 pounds of concentrates fed the sow and pigs from the time the pigs were farrowed till they were weighed, or 3.93 pounds of concentrates per pound of gain.

Fred sold his litter to Armour & Co., at $11.10 per hundredweight or a total of $298.59, receiving a premium of 25 cents per hundred because of the excellent finish on his pigs. This was the highest price paid for hogs on the Spokane market this season.

From the time of breeding till the time of farrowing, this sow was fed a grain mixture of three parts ground oats and eight parts ground wheat, with a little alfalfa hay and mineral mixture. From farrowing time to weaning time, the sow was fed a grain mixture of 12 parts ground wheat, 2 parts ground oats, and 1 part meat meal consisting of 60 per cent protein.

The pigs were started on white shorts mixed with a little milk. This was gradually changed to a mixture of nine parts ground wheat, and one part tankage which was fed in a self-feeder. Ground oats was gradually added after weaning time till the mixture consisted of 5 parts ground wheat and 1 part 60 per cent meat meal. The sow and pigs had access at all times to plenty of fresh water, good alfalfa pasture, and mineral mixture.

Fred's system of management included not only good feeding, but good housing and sanitation. Before farrowing time he built a warm, rectangular, movable hog house. This not only made it easier to save all the pigs but to move the pigs each year to uncontaminated ground, thus avoiding danger from round worms.- Elmina White, State Club Leader, State College of Washington, Pullman.

Wyoming

A State ton-litter contest was started last spring with nine enrolled from two counties. To date, but one feeder has completed the 180-day feeding period.

John Clark of Wheatland, is the first man in Wyoming to grow a ton of pork in 180 days. This litter was a purebred Duroc Jersey litter out of Lady Beauty's Pride No. 1,041,506. Twelve pigs were farrowed on May 6, and 11 were saved. The litter was weighed five times during the feeding period. The weights were as follows:

81 days	870 pounds
92 days	1,073 pounds
124 days	1,594 pounds
152 days	2,130 pounds
180 days	2,684 pounds

The hogs were on one-fourth acre of alfalfa pasture and were fed rye and wheat chop. New corn was fed as a slop. Salt was before them at all times. Milk was fed only a small part of the time. The total cost of feeds including pasture and salt was $114. The cost per hundred pounds gain was $4.25. At $8.50 per hundredweight, which was the market price at the time, the litter, if sold, would have brought $228.18, making a profit over and above feed cost of $114.18. The 6 gilts averaged 245 pounds and the 5 boars 242 pounds at the close of the demonstration. The average daily gain was 1.35 pounds.- D. J. Robertson, Livestock Specialist, College of Agriculture, University of Wyoming, Laramie.

Summary

During the year, 19 States conducted ton-litter contests, and over 439 official ton litters were produced according to the reports of animal husbandry specialists.

It is significant to note that all litters reaching the goal carried a preponderance of pure breeding and averaged nearly 11 pigs per litter.

Interest is apparently increasing in these contests, and new sections will be represented in this year's records, judging from present enrollments. More attention, also, is evidently being directed to the economic features of the projects.

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